SCORE OVER LENGTH SEARCHES

Attached is a score over length search. This search was developed to overcome limitations in most standard search systems which favor large sequences with high scoring, but lesser overall identity over smaller sequences with higher overall identity. This search is especially useful for relatively small nucleic acid or polypeptide target sequences (antisense, fragments, probes, primers, RNAi, epitopes, haptens, etc.) claimed functionally via a form of hybridization and/or identity language and having defined upper and lower polynucleotide and or polypeptide length limits.

The score over length search is performed by first running the query sequence using examiner-specified identity and polynucleotide or protein length limit parameters, and saving 65,000 hits and 0 alignments from each desired database. The resulting output is reformatted using a Microsoft Word macro and is imported into Excel. The summary table data are then sorted by the ratio of score of each hit sequence divided by its length and the accession numbers for all hits below the examiner's desired score over length parameters are deleted. The remaining accession numbers are used to pull the corresponding sequences from the databases into subdatabases enriched for good hits and the query sequence is re-run against these subdatabases to yield the final results.

The score over length cutoff for this search is 100%, length 12-30nt.

Examiner Please Note: This cover sheet should be included when submitting results to be scanned.

searches length & complementarity, need to confirm hit is w/in 30

Note: There were no hits matching your criteria in EST, Genbank/EMBL, or Issued_Patents_NA, so no results from these databases are included in the score over length results.

GenCore version 5.1.8

OM nucleic - nucleic search, using sw model

Run on: May 9, 2006, 12:39:59 ; Search time 0.001 Seconds
(without alignments)
31.232 Million cell updates/sec

Title: US-09-918-187-3_2989-3052
Perfect score: 64
Sequence: 1 caggcagctccctcctgcac.....cactgcttctcttttgaaag 64

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 12 seqs, 244 residues

Total number of hits satisfying chosen parameters: 24

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 12 summaries

Published_Applications_NA_News

Database : pubnewdb:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	25	39.1	25	1	US-11-121-849-244253	Sequence 244253,
2	21	32.8	21	1	US-10-923-451-798	Sequence 798, App
3	21	32.8	21	1	US-10-923-451-800	Sequence 800, App
4	21	32.8	21	1	US-10-923-451-802	Sequence 802, App
5	21	32.8	21	1	US-10-923-451-804	Sequence 804, App
6	21	32.8	21	1	US-10-923-451-805	Sequence 805, App
7	19	29.7	19	1	US-10-923-451-167	Sequence 167, App
8	19	29.7	19	1	US-10-923-451-168	Sequence 168, App
9	19	29.7	19	1	US-10-923-451-169	Sequence 169, App
c 10	19	29.7	19	1	US-10-923-451-457	Sequence 457, App
c 11	19	29.7	19	1	US-10-923-451-458	Sequence 458, App
c 12	19	29.7	19	1	US-10-923-451-459	Sequence 459, App

ALIGNMENTS

RESULT 1
US-11-121-849-244253
; Sequence 244253, Application US/11121849
; Publication No. US20050272080A1
; GENERAL INFORMATION:
; APPLICANT: John Palma
; TITLE OF INVENTION: Methods of Genetic Analysis of Formalin Fixed Paraffin Embedded S
; TITLE OF INVENTION: Microarrays
; FILE REFERENCE: 3684.1
; CURRENT APPLICATION NUMBER: US/11/121,849
; CURRENT FILING DATE: 2005-05-03
; PRIOR APPLICATION NUMBER: 60/567,949
; PRIOR FILING DATE: 2004-05-03
; NUMBER OF SEQ ID NOS: 673904
; SOFTWARE: Microarray Probe Sequence Listing Generator V 1.1
; SEQ ID NO 244253
; LENGTH: 25
; TYPE: DNA
; ORGANISM: Homo sapien
US-11-121-849-244253

Query Match 39.1%; Score 25; DB 1; Length 25;
Best Local Similarity 100.0%; Pred. No. 1.1;
Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          28 GCTCAGGGTCACTGAACCACTGCTT 52
               |||||||||||||||||||||||||
Db           1 GCTCAGGGTCACTGAACCACTGCTT 25
```

RESULT 2
US-10-923-451-798
; Sequence 798, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
; APPLICANT: Sirna Therapeutics, Inc.
; APPLICANT: McSwiggen, James
; APPLICANT: Thompson, James
; APPLICANT: Beigelman, Leonid
; TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
; TITLE OF INVENTION: (SCD) Gene Expression Using Short Interfering Nucleic Acid (siN
; FILE REFERENCE: 400/210 (MBHB02-1030-C)
; CURRENT APPLICATION NUMBER: US/10/923,451
; CURRENT FILING DATE: 2004-08-20
; NUMBER OF SEQ ID NOS: 810
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 798
; LENGTH: 21
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(1)
; OTHER INFORMATION: 5'-3 attached terminal deoxyabasic moeity, inverted abasic,
; OTHER INFORMATION: inverted nucleotide or other terminal cap that is optionally pre
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (21)..(21)
; OTHER INFORMATION: 3'-3 attached terminal deoxyabasic moeity, inverted abasic,
; OTHER INFORMATION: inverted nucleotide or other terminal cap that is optionally pre
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (20)..(20)
; OTHER INFORMATION: Phosphorothioate or Phosphorodithioate 3'-Internucleotide Linkage
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(19)
; OTHER INFORMATION: RNA
US-10-923-451-798

Query Match 32.8%; Score 21; DB 1; Length 21;
Best Local Similarity 66.7%; Pred. No. 2.8;
Matches 14; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

```
Qy          39 CTGAACCACTGCTTCTCTTTT 59
               |:|||||||:||::|:|::||
Db           1 CUGAACCACUGCUUCUCUUTT 21
```

RESULT 3
US-10-923-451-800
; Sequence 800, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
; APPLICANT: Sirna Therapeutics, Inc.
; APPLICANT: McSwiggen, James
; APPLICANT: Thompson, James

; APPLICANT: Beigelman, Leonid
; TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
; TITLE OF INVENTION: (SCD) Gene Expression Using Short Interfering Nucleic Acid (siNA
; FILE REFERENCE: 400/210 (MBHB02-1030-C)
; CURRENT APPLICATION NUMBER: US/10/923,451
; CURRENT FILING DATE: 2004-08-20
; NUMBER OF SEQ ID NOS: 810
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 800
; LENGTH: 21
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (3)..(5)
; OTHER INFORMATION: 2'-O-Methyl
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (8)..(8)
; OTHER INFORMATION: 2'-O-Methyl
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (11)..(11)
; OTHER INFORMATION: 2'-O-Methyl
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(2)
; OTHER INFORMATION: 2'-deoxy-2'-Fluoro
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (6)..(7)
; OTHER INFORMATION: 2'-deoxy-2'-Fluoro
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (9)..(10)
; OTHER INFORMATION: 2'-deoxy-2'-Fluoro
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (12)..(19)
; OTHER INFORMATION: 2'-deoxy-2'-Fluoro
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(19)
; OTHER INFORMATION: RNA
US-10-923-451-800

Query Match 32.8%; Score 21; DB 1; Length 21;
Best Local Similarity 66.7%; Pred. No. 2.8;
Matches 14; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

```
Qy         39 CTGAACCACTGCTTCTCTTTT 59
              |:|||||||:||::|:|::||
Db          1 CUGAACCACUGCUUCUCUUTT 21
```

RESULT 4
US-10-923-451-802
; Sequence 802, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
; APPLICANT: Sirna Therapeutics, Inc.
; APPLICANT: McSwiggen, James
; APPLICANT: Thompson, James
; APPLICANT: Beigelman, Leonid
; TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
; TITLE OF INVENTION: (SCD) Gene Expression Using Short Interfering Nucleic Acid (siNA
; FILE REFERENCE: 400/210 (MBHB02-1030-C)
; CURRENT APPLICATION NUMBER: US/10/923,451
; CURRENT FILING DATE: 2004-08-20
; NUMBER OF SEQ ID NOS: 810
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 802
; LENGTH: 21
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(2)
; OTHER INFORMATION: 2'-O-Methyl or 2'-deoxy-2'-Fluoro
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (6)..(7)
; OTHER INFORMATION: 2'-O-Methyl or 2'-deoxy-2'-Fluoro
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (9)..(10)
; OTHER INFORMATION: 2'-O-Methyl or 2'-deoxy-2'-Fluoro
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (12)..(19)
; OTHER INFORMATION: 2'-O-Methyl or 2'-deoxy-2'-Fluoro
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(1)
; OTHER INFORMATION: 5'-3 attached terminal deoxyabasic moeity, inverted abasic,
; OTHER INFORMATION: inverted nucleotide or other terminal cap that is optionally pre
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (21)..(21)
; OTHER INFORMATION: 3'-3 attached terminal deoxyabasic moeity, inverted abasic,
; OTHER INFORMATION: inverted nucleotide or other terminal cap that is optionally pre
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (1)..(19)
; OTHER INFORMATION: RNA
US-10-923-451-802

Query Match 32.8%; Score 21; DB 1; Length 21;
Best Local Similarity 66.7%; Pred. No. 2.8;
Matches 14; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

```
Qy         39 CTGAACCACTGCTTCTCTTTT 59
              |:|||||||:||::|:|::||
Db          1 CUGAACCACUGCUUCUCUUTT 21
```

RESULT 5
US-10-923-451-804
; Sequence 804, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
; APPLICANT: Sirna Therapeutics, Inc.
; APPLICANT: McSwiggen, James
; APPLICANT: Thompson, James
; APPLICANT: Beigelman, Leonid
; TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
; TITLE OF INVENTION: (SCD) Gene Expression Using Short Interfering Nucleic Acid (siN
; FILE REFERENCE: 400/210 (MBHB02-1030-C)
; CURRENT APPLICATION NUMBER: US/10/923,451
; CURRENT FILING DATE: 2004-08-20
; NUMBER OF SEQ ID NOS: 810
; SOFTWARE: PatentIn version 3.3
; SEQ ID NO 804
; LENGTH: 21
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (3)..(5)
; OTHER INFORMATION: 2'-deoxy

```
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (8)..(8)
;   OTHER INFORMATION: 2'-deoxy
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (11)..(11)
;   OTHER INFORMATION: 2'-deoxy
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)..(2)
;   OTHER INFORMATION: 2'-deoxy-2'-Fluoro
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (6)..(7)
;   OTHER INFORMATION: 2'-deoxy-2'-Fluoro
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (9)..(10)
;   OTHER INFORMATION: 2'-deoxy-2'-Fluoro
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (12)..(19)
;   OTHER INFORMATION: 2'-deoxy-2'-Fluoro
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)..(1)
;   OTHER INFORMATION: 5'-3 attached terminal deoxyabasic moiety, inverted abasic,
;   OTHER INFORMATION: inverted nucleotide or other terminal cap that is optionally pres
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (21)..(21)
;   OTHER INFORMATION: 3'-3 attached terminal deoxyabasic moiety, inverted abasic,
;   OTHER INFORMATION: inverted nucleotide or other terminal cap that is optionally pres
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)..(19)
;   OTHER INFORMATION: RNA
US-10-923-451-804

  Query Match             32.8%;  Score 21;  DB 1;  Length 21;
  Best Local Similarity   66.7%;  Pred. No. 2.8;
  Matches   14;  Conservative    7;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         39 CTGAACCACTGCTTCTCTTTT 59
              |:|||||||:||::|:|::||
Db          1 CUGAACCACUGCUUCUCUUTT 21


RESULT 6
US-10-923-451-805
; Sequence 805, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
;  APPLICANT: Sirna Therapeutics, Inc.
;  APPLICANT:  McSwiggen, James
;  APPLICANT:  Thompson, James
;  APPLICANT:  Beigelman, Leonid
;  TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
;  TITLE OF INVENTION:  (SCD) Gene Expression Using Short Interfering Nucleic Acid (siNA
;  FILE REFERENCE: 400/210 (MBHB02-1030-C)
;  CURRENT APPLICATION NUMBER: US/10/923,451
;  CURRENT FILING DATE:  2004-08-20
;  NUMBER OF SEQ ID NOS: 810
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 805
;   LENGTH: 21
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:  Synthetic
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)..(2)
;   OTHER INFORMATION: 2'-deoxy-2'-Fluoro
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (6)..(7)
;   OTHER INFORMATION: 2'-deoxy-2'-Fluoro
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (9)..(10)
;   OTHER INFORMATION: 2'-deoxy-2'-Fluoro
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (12)..(19)
;   OTHER INFORMATION: 2'-deoxy-2'-Fluoro
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)..(1)
;   OTHER INFORMATION: 5'-3 attached terminal deoxyabasic moiety, inverted abasic,
;   OTHER INFORMATION: inverted nucleotide or other terminal cap that is optionally pres
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (21)..(21)
;   OTHER INFORMATION: 3'-3 attached terminal deoxyabasic moiety, inverted abasic,
;   OTHER INFORMATION: inverted nucleotide or other terminal cap that is optionally pres
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (1)..(19)
;   OTHER INFORMATION: RNA
US-10-923-451-805

  Query Match             32.8%;  Score 21;  DB 1;  Length 21;
  Best Local Similarity   66.7%;  Pred. No. 2.8;
  Matches   14;  Conservative    7;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         39 CTGAACCACTGCTTCTCTTTT 59
              |:|||||||:||::|:|::||
Db          1 CUGAACCACUGCUUCUCUUTT 21


RESULT 7
US-10-923-451-167
; Sequence 167, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
;  APPLICANT: Sirna Therapeutics, Inc.
;  APPLICANT:  McSwiggen, James
;  APPLICANT:  Thompson, James
;  APPLICANT:  Beigelman, Leonid
;  TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
;  TITLE OF INVENTION:  (SCD) Gene Expression Using Short Interfering Nucleic Acid (siNA
;  FILE REFERENCE: 400/210 (MBHB02-1030-C)
;  CURRENT APPLICATION NUMBER: US/10/923,451
;  CURRENT FILING DATE:  2004-08-20
;  NUMBER OF SEQ ID NOS: 810
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 167
;   LENGTH: 19
;   TYPE: RNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic
US-10-923-451-167

  Query Match             29.7%;  Score 19;  DB 1;  Length 19;
  Best Local Similarity   84.2%;  Pred. No. 4.5;
  Matches   16;  Conservative    3;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 GGCAGCTCCCTCCTGCACA 21
              ||||||:|||:||:|||||
Db          1 GGCAGCUCCCUCCUGCACA 19


RESULT 8
```

```
US-10-923-451-168
; Sequence 168, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
;  APPLICANT: Sirna Therapeutics, Inc.
;  APPLICANT:  McSwiggen, James
;  APPLICANT:  Thompson, James
;  APPLICANT:  Beigelman, Leonid
;  TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
;  TITLE OF INVENTION:  (SCD) Gene Expression Using Short Interfering Nucleic Acid (siNA
;  FILE REFERENCE: 400/210 (MBHB02-1030-C)
;  CURRENT APPLICATION NUMBER: US/10/923,451
;  CURRENT FILING DATE:  2004-08-20
;  NUMBER OF SEQ ID NOS: 810
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 168
;   LENGTH: 19
;   TYPE: RNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic
US-10-923-451-168

  Query Match             29.7%;  Score 19;  DB 1;  Length 19;
  Best Local Similarity   84.2%;  Pred. No. 4.5;
  Matches   16;  Conservative    3;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         21 ACAGAATGCTCAGGGTCAC 39
              ||||||:||:|||||:|||
Db          1 ACAGAAUGCUCAGGGUCAC 19


RESULT 9
US-10-923-451-169
; Sequence 169, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
;  APPLICANT: Sirna Therapeutics, Inc.
;  APPLICANT:  McSwiggen, James
;  APPLICANT:  Thompson, James
;  APPLICANT:  Beigelman, Leonid
;  TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
;  TITLE OF INVENTION:  (SCD) Gene Expression Using Short Interfering Nucleic Acid (siNA
;  FILE REFERENCE: 400/210 (MBHB02-1030-C)
;  CURRENT APPLICATION NUMBER: US/10/923,451
;  CURRENT FILING DATE:  2004-08-20
;  NUMBER OF SEQ ID NOS: 810
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 169
;   LENGTH: 19
;   TYPE: RNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic
US-10-923-451-169

  Query Match             29.7%;  Score 19;  DB 1;  Length 19;
  Best Local Similarity   63.2%;  Pred. No. 4.5;
  Matches   12;  Conservative    7;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         39 CTGAACCACTGCTTCTCTT 57
              |:|||||||:||::|:|::
Db          1 CUGAACCACUGCUUCUCUU 19


RESULT 10
US-10-923-451-457/c
; Sequence 457, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
;  APPLICANT: Sirna Therapeutics, Inc.
;  APPLICANT:  McSwiggen, James
;  APPLICANT:  Thompson, James
;  APPLICANT:  Beigelman, Leonid
;  TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
;  TITLE OF INVENTION:  (SCD) Gene Expression Using Short Interfering Nucleic Acid (siNA
;  FILE REFERENCE: 400/210 (MBHB02-1030-C)
;  CURRENT APPLICATION NUMBER: US/10/923,451
;  CURRENT FILING DATE:  2004-08-20
;  NUMBER OF SEQ ID NOS: 810
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 457
;   LENGTH: 19
;   TYPE: RNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic
US-10-923-451-457

  Query Match             29.7%;  Score 19;  DB 1;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 4.5;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          3 GGCAGCTCCCTCCTGCACA 21
              |||||||||||||||||||
Db         19 GGCAGCTCCCTCCTGCACA 1


RESULT 11
US-10-923-451-458/c
; Sequence 458, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
;  APPLICANT: Sirna Therapeutics, Inc.
;  APPLICANT:  McSwiggen, James
;  APPLICANT:  Thompson, James
;  APPLICANT:  Beigelman, Leonid
;  TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
;  TITLE OF INVENTION:  (SCD) Gene Expression Using Short Interfering Nucleic Acid (siNA
;  FILE REFERENCE: 400/210 (MBHB02-1030-C)
;  CURRENT APPLICATION NUMBER: US/10/923,451
;  CURRENT FILING DATE:  2004-08-20
;  NUMBER OF SEQ ID NOS: 810
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 458
;   LENGTH: 19
;   TYPE: RNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Synthetic
US-10-923-451-458

  Query Match             29.7%;  Score 19;  DB 1;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 4.5;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         21 ACAGAATGCTCAGGGTCAC 39
              |||||||||||||||||||
Db         19 ACAGAATGCTCAGGGTCAC 1


RESULT 12
US-10-923-451-459/c
; Sequence 459, Application US/10923451
; Publication No. US20050256068A1
; GENERAL INFORMATION:
;  APPLICANT: Sirna Therapeutics, Inc.
;  APPLICANT:  McSwiggen, James
;  APPLICANT:  Thompson, James
;  APPLICANT:  Beigelman, Leonid
;  TITLE OF INVENTION: RNA Interference Mediated Inhibition of Stearoyl-CoA Desarturase
;  TITLE OF INVENTION:  (SCD) Gene Expression Using Short Interfering Nucleic Acid (siNA
;  FILE REFERENCE: 400/210 (MBHB02-1030-C)
;  CURRENT APPLICATION NUMBER: US/10/923,451
;  CURRENT FILING DATE:  2004-08-20
;  NUMBER OF SEQ ID NOS: 810
```

```
;  SOFTWARE: PatentIn version 3.3
; SEQ ID NO 459
;    LENGTH: 19
;    TYPE: RNA
;    ORGANISM: Artificial Sequence
;    FEATURE:
;    OTHER INFORMATION: Synthetic
US-10-923-451-459

  Query Match             29.7%;  Score 19;  DB 1;  Length 19;
  Best Local Similarity   100.0%;  Pred. No. 4.5;
  Matches   19;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         39 CTGAACCACTGCTTCTCTT 57
              |||||||||||||||||||
Db         19 CTGAACCACTGCTTCTCTT 1


Search completed: May  9, 2006, 12:39:59
Job time : 0.001 secs
```

GenCore version 5.1.8

OM nucleic - nucleic search, using sw model

Run on: May 9, 2006, 12:41:46 ; Search time 0.001 Seconds
(without alignments)
10.240 Million cell updates/sec

Title: US-09-918-187-3_2989-3052
Perfect score: 64
Sequence: 1 caggcagctccctcctgcac.....cactgcttctcttttgaaag 64

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 4 seqs, 80 residues

Total number of hits satisfying chosen parameters: 8

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 4 summaries

Published_Applications_NA_Main

Database : pubmaindb:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
c	1	20	31.2	20	1	US-09-918-187-30	Sequence 30, Appl
c	2	20	31.2	20	1	US-10-484-442-30	Sequence 30, Appl
c	3	20	31.2	20	1	US-10-619-253-30	Sequence 30, Appl
c	4	20	31.2	20	1	US-10-619-253-124	Sequence 124, App

ALIGNMENTS

RESULT 1
US-09-918-187-30/c
; Sequence 30, Application US/09918187
; Publication No. US20030083282A1
; GENERAL INFORMATION:
; APPLICANT: Rosanne M. Crooke
; APPLICANT: Mark J. Graham
; TITLE OF INVENTION: ANTISENSE MODULATION OF STEAROYL-COA DESATURASE EXPRESSION
; FILE REFERENCE: ISPH-0590
; CURRENT APPLICATION NUMBER: US/09/918,187
; CURRENT FILING DATE: 2001-07-30
; NUMBER OF SEQ ID NOS: 80
; SEQ ID NO 30
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Antisense Oligonucleotide
US-09-918-187-30

Query Match 31.2%; Score 20; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy         23 AGAATGCTCAGGGTCACTGA 42
              ||||||||||||||||||||
Db         20 AGAATGCTCAGGGTCACTGA 1
```

RESULT 2
US-10-484-442-30/c
; Sequence 30, Application US/10484442
; Publication No. US20040254359A1
; GENERAL INFORMATION:
; APPLICANT: Isis Pharmaceuticals, Inc.
; APPLICANT: Rosanne M. Crooke
; APPLICANT: Mark J. Graham
; TITLE OF INVENTION: ANTISENSE MODULATION OF STEAROYL?COA DESATURASE EXPRESSION
; FILE REFERENCE: ISPH?0695
; CURRENT APPLICATION NUMBER: US/10/484,442
; CURRENT FILING DATE: 2004-01-29
; PRIOR APPLICATION NUMBER: 09/918,187
; PRIOR FILING DATE: 2001-07-30
; NUMBER OF SEQ ID NOS: 80
; SEQ ID NO 30
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Antisense Oligonucleotide
US-10-484-442-30

Query Match 31.2%; Score 20; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy         23 AGAATGCTCAGGGTCACTGA 42
              ||||||||||||||||||||
Db         20 AGAATGCTCAGGGTCACTGA 1
```

RESULT 3
US-10-619-253-30/c
; Sequence 30, Application US/10619253
; Publication No. US20050043256A1
; GENERAL INFORMATION:
; APPLICANT: Rosanne M. Crooke
; APPLICANT: Mark J. Graham
; TITLE OF INVENTION: ANTISENSE MODULATION OF STEAROYL-COA DESATURASE EXPRESSION
; FILE REFERENCE: ISPH-0590US.P1
; CURRENT APPLICATION NUMBER: US/10/619,253
; CURRENT FILING DATE: 2003-07-15
; PRIOR APPLICATION NUMBER: US 09/918,187
; PRIOR FILING DATE: 2001-07-30
; NUMBER OF SEQ ID NOS: 418
; SEQ ID NO 30
; LENGTH: 20
; TYPE: DNA
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Antisense Oligonucleotide
US-10-619-253-30

Query Match 31.2%; Score 20; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.2;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy         23 AGAATGCTCAGGGTCACTGA 42
              ||||||||||||||||||||
Db         20 AGAATGCTCAGGGTCACTGA 1
```

RESULT 4
US-10-619-253-124/c
; Sequence 124, Application US/10619253
; Publication No. US20050043256A1
; GENERAL INFORMATION:

```
;  APPLICANT: Rosanne M. Crooke
;  APPLICANT:  Mark J. Graham
;  TITLE OF INVENTION: ANTISENSE MODULATION OF STEAROYL-COA DESATURASE EXPRESSION
;  FILE REFERENCE: ISPH-0590US.P1
;  CURRENT APPLICATION NUMBER: US/10/619,253
;  CURRENT FILING DATE:  2003-07-15
;  PRIOR APPLICATION NUMBER: US 09/918,187
;  PRIOR FILING DATE: 2001-07-30
;  NUMBER OF SEQ ID NOS: 418
; SEQ ID NO 124
;   LENGTH: 20
;   TYPE: DNA
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Antisense Oligonucleotide
US-10-619-253-124

  Query Match             31.2%;  Score 20;  DB 1;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 1.2;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         32 AGGGTCACTGAACCACTGCT 51
              ||||||||||||||||||||
Db         20 AGGGTCACTGAACCACTGCT 1


Search completed: May  9, 2006, 12:41:46
Job time : 0.001 secs
```

GenCore version 5.1.8

OM nucleic - nucleic search, using sw model

Run on: May 9, 2006, 12:41:12 ; Search time 0.001 Seconds
(without alignments)
30.336 Million cell updates/sec

Title: US-09-918-187-3_2989-3052
Perfect score: 64
Sequence: 1 caggcagctccctcctgcac.....cactgcttctcttttgaaag 64

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 12 seqs, 237 residues

Total number of hits satisfying chosen parameters: 24

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 12 summaries

N-Geneseq

Database : ngsdb:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.		Score	% Query Match	Length	DB	ID	Description
1		21	32.8	21	1	ADE27671	Stearoyl-CoA desat
2		21	32.8	21	1	ADE27667	Stearoyl-CoA desat
3		21	32.8	21	1	ADE27669	Stearoyl-CoA desat
4	c	20	31.2	20	1	ABZ77075	Human stearoyl-CoA
5	c	20	31.2	20	1	ADX18220	Human Stearoyl-CoA
6	c	20	31.2	20	1	ADX18126	Human Stearoyl-CoA
7	c	19	29.7	19	1	ADE27514	Stearoyl-CoA desat
8		19	29.7	19	1	ADE27225	Stearoyl-CoA desat
9		19	29.7	19	1	ADE27223	Stearoyl-CoA desat
10	c	19	29.7	19	1	ADE27513	Stearoyl-CoA desat
11		19	29.7	19	1	ADE27224	Stearoyl-CoA desat
12	c	19	29.7	19	1	ADE27515	Stearoyl-CoA desat

ALIGNMENTS

RESULT 1
ADE27671
ID ADE27671 standard; RNA; 21 BP.
XX
AC ADE27671;
XX
DT 29-JAN-2004 (first entry)
XX
DE Stearoyl-CoA desaturase siNA oligonucleotide SEQ ID NO:626.
XX
KW short interfering nucleic acid; siNA; downregulation; inhibition; SCD;
KW stearoyl-CoA desaturase; RNA interference; anorectic; antidiabetic;
KW antiarteriosclerotic; cytostatic; virucide; obesity; diabetes;
KW atherosclerosis; cancer; viral infection; drug screening;
KW genetic engineering; pharmacogenomic; gene mapping; ss.
XX
OS Synthetic.
XX
PN WO2003070885-A2.
XX
PD 28-AUG-2003.
XX
PF 13-FEB-2003; 2003WO-US004317.
XX
PR 20-FEB-2002; 2002US-0358580P.
PR 11-MAR-2002; 2002US-0363124P.
PR 06-JUN-2002; 2002US-0386782P.
PR 29-AUG-2002; 2002US-0406784P.
PR 05-SEP-2002; 2002US-0408378P.
PR 09-SEP-2002; 2002US-0409293P.
PR 20-SEP-2002; 2002US-0412304P.
PR 15-JAN-2003; 2003US-0440129P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J, Beigelman L, Thompson J;
XX
DR WPI; 2003-721687/68.
XX
PT New short interfering nucleic acid, useful e.g. for treatment and
PT diagnosis of obesity or diabetes, downregulates expression of the
PT stearoyl-CoA desaturase gene.
XX
PS Disclosure; SEQ ID NO 626; 139pp; English.
XX
CC The present invention describes a short interfering nucleic acid (siNA)
CC that downregulates expression of the SCD (stearoyl-CoA desaturase) gene
CC by RNA interference. Also described: (1) modulating expression of SCD
CC genes in cells, tissue explants or organisms by introduction of siNA; (2)
CC kits for in vitro or in vivo delivery of siNA; (3) conjugates and/or
CC complexes of siNA; and (4) vectors that express siNA. SCD inhibiting
CC siNAs have anorectic, antidiabetic, antiarteriosclerotic, cytostatic and
CC virucide activities. The siNAs can be used to modulate expression of SCD
CC genes, in cells, tissue explants or organisms, e.g. for treating obesity;
CC diabetes (types I and II); atherosclerosis; cancer and viral infections.
CC They can also be used for drug screening; diagnosis; target
CC identification and validation; genetic engineering; pharmacogenomics;
CC studying gene function and gene mapping (e.g. of single-nucleotide
CC polymorphisms). The present sequence represents an SCD siNA, which is
CC used in the exemplification of the present invention.
XX
SQ Sequence 21 BP; 3 A; 7 C; 2 G; 2 T; 7 U; 0 Other;

Query Match 32.8%; Score 21; DB 1; Length 21;
Best Local Similarity 66.7%; Pred. No. 2.6;
Matches 14; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

```
Qy         39 CTGAACCACTGCTTCTCTTTT 59
              |:|||||||:||::|:|::||
Db          1 CUGAACCACUGCUUCUCUUTT 21
```

RESULT 2
ADE27667
ID ADE27667 standard; RNA; 21 BP.
XX
AC ADE27667;
XX
DT 29-JAN-2004 (first entry)
XX
DE Stearoyl-CoA desaturase siNA oligonucleotide SEQ ID NO:622.
XX
KW short interfering nucleic acid; siNA; downregulation; inhibition; SCD;
KW stearoyl-CoA desaturase; RNA interference; anorectic; antidiabetic;
KW antiarteriosclerotic; cytostatic; virucide; obesity; diabetes;
KW atherosclerosis; cancer; viral infection; drug screening;
KW genetic engineering; pharmacogenomic; gene mapping; ss.
XX
OS Synthetic.

XX
PN WO2003070885-A2.
XX
PD 28-AUG-2003.
XX
PF 13-FEB-2003; 2003WO-US004317.
XX
PR 20-FEB-2002; 2002US-0358580P.
PR 11-MAR-2002; 2002US-0363124P.
PR 06-JUN-2002; 2002US-0386782P.
PR 29-AUG-2002; 2002US-0406784P.
PR 05-SEP-2002; 2002US-0408378P.
PR 09-SEP-2002; 2002US-0409293P.
PR 20-SEP-2002; 2002US-0412304P.
PR 15-JAN-2003; 2003US-0440129P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J, Beigelman L, Thompson J;
XX
DR WPI; 2003-721687/68.
XX
PT New short interfering nucleic acid, useful e.g. for treatment and
PT diagnosis of obesity or diabetes, downregulates expression of the
PT stearoyl-CoA desaturase gene.
XX
PS Disclosure; SEQ ID NO 622; 139pp; English.
XX
CC The present invention describes a short interfering nucleic acid (siNA)
CC that downregulates expression of the SCD (stearoyl-CoA desaturase) gene
CC by RNA interference. Also described: (1) modulating expression of SCD
CC genes in cells, tissue explants or organisms by introduction of siNA; (2)
CC kits for in vitro or in vivo delivery of siNA; (3) conjugates and/or
CC complexes of siNA; and (4) vectors that express siNA. SCD inhibiting
CC siNAs have anorectic, antidiabetic, antiarteriosclerotic, cytostatic and
CC virucide activities. The siNAs can be used to modulate expression of SCD
CC genes, in cells, tissue explants or organisms, e.g. for treating obesity;
CC diabetes (types I and II); atherosclerosis; cancer and viral infections.
CC They can also be used for drug screening; diagnosis; target
CC identification and validation; genetic engineering; pharmacogenomics;
CC studying gene function and gene mapping (e.g. of single-nucleotide
CC polymorphisms). The present sequence represents an SCD siNA, which is
CC used in the exemplification of the present invention.
XX
SQ Sequence 21 BP; 3 A; 7 C; 2 G; 2 T; 7 U; 0 Other;

Query Match 32.8%; Score 21; DB 1; Length 21;
Best Local Similarity 66.7%; Pred. No. 2.6;
Matches 14; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

```
Qy         39 CTGAACCACTGCTTCTCTTTT 59
              |:|||||||:||::|:|::||
Db          1 CUGAACCACUGCUUCUCUUTT 21
```

RESULT 3
ADE27669
ID ADE27669 standard; RNA; 21 BP.
XX
AC ADE27669;
XX
DT 29-JAN-2004 (first entry)
XX
DE Stearoyl-CoA desaturase siNA oligonucleotide SEQ ID NO:624.
XX
KW short interfering nucleic acid; siNA; downregulation; inhibition; SCD;
KW stearoyl-CoA desaturase; RNA interference; anorectic; antidiabetic;
KW antiarteriosclerotic; cytostatic; virucide; obesity; diabetes;
KW atherosclerosis; cancer; viral infection; drug screening;
KW genetic engineering; pharmacogenomic; gene mapping; ss.
XX
OS Synthetic.
XX

PN WO2003070885-A2.
XX
PD 28-AUG-2003.
XX
PF 13-FEB-2003; 2003WO-US004317.
XX
PR 20-FEB-2002; 2002US-0358580P.
PR 11-MAR-2002; 2002US-0363124P.
PR 06-JUN-2002; 2002US-0386782P.
PR 29-AUG-2002; 2002US-0406784P.
PR 05-SEP-2002; 2002US-0408378P.
PR 09-SEP-2002; 2002US-0409293P.
PR 20-SEP-2002; 2002US-0412304P.
PR 15-JAN-2003; 2003US-0440129P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J, Beigelman L, Thompson J;
XX
DR WPI; 2003-721687/68.
XX
PT New short interfering nucleic acid, useful e.g. for treatment and
PT diagnosis of obesity or diabetes, downregulates expression of the
PT stearoyl-CoA desaturase gene.
XX
PS Disclosure; SEQ ID NO 624; 139pp; English.
XX
CC The present invention describes a short interfering nucleic acid (siNA)
CC that downregulates expression of the SCD (stearoyl-CoA desaturase) gene
CC by RNA interference. Also described: (1) modulating expression of SCD
CC genes in cells, tissue explants or organisms by introduction of siNA; (2)
CC kits for in vitro or in vivo delivery of siNA; (3) conjugates and/or
CC complexes of siNA; and (4) vectors that express siNA. SCD inhibiting
CC siNAs have anorectic, antidiabetic, antiarteriosclerotic, cytostatic and
CC virucide activities. The siNAs can be used to modulate expression of SCD
CC genes, in cells, tissue explants or organisms, e.g. for treating obesity;
CC diabetes (types I and II); atherosclerosis; cancer and viral infections.
CC They can also be used for drug screening; diagnosis; target
CC identification and validation; genetic engineering; pharmacogenomics;
CC studying gene function and gene mapping (e.g. of single-nucleotide
CC polymorphisms). The present sequence represents an SCD siNA, which is
CC used in the exemplification of the present invention.
XX
SQ Sequence 21 BP; 3 A; 7 C; 2 G; 2 T; 7 U; 0 Other;

Query Match 32.8%; Score 21; DB 1; Length 21;
Best Local Similarity 66.7%; Pred. No. 2.6;
Matches 14; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

```
Qy         39 CTGAACCACTGCTTCTCTTTT 59
              |:|||||||:||::|:|::||
Db          1 CUGAACCACUGCUUCUCUUTT 21
```

RESULT 4
ABZ77075/c
ID ABZ77075 standard; DNA; 20 BP.
XX
AC ABZ77075;
XX
DT 07-MAY-2003 (first entry)
XX
DE Human stearoyl-CoA desaturase phosphorothioate oligonucleotide SEQ:30.
XX
KW Human; stearoyl-CoA desaturase; phosphorothioate; 2'-O-methoxyethyl;
KW 2'-MOE; cardiovascular; antiarteriosclerotic; antilipaemic; cytostatic;
KW antiinflammatory; antisense therapy; antisense oligonucleotide; tumour;
KW abnormal lipid metabolism; abnormal cholesterol metabolism; infection;
KW atherosclerosis; cardiovascular disease; inflammation; inhibition; ss.
XX
OS Homo sapiens.
OS Synthetic.
XX

```
FH   Key             Location/Qualifiers
FT   modified_base   1. .20
FT                   /*tag=  a
FT                   /mod_base= OTHER
FT                   /note= "phosphorothioate linkages"
FT   modified_base   1. .5
FT                   /*tag=  b
FT                   /mod_base= OTHER
FT                   /note= "2'-O-methoxyethyl (2'-MOE) gapmer"
FT   modified_base   16. .20
FT                   /*tag=  c
FT                   /mod_base= OTHER
FT                   /note= "2'-O-methoxyethyl (2'-MOE) gapmer"
XX
PN   WO2003012031-A2.
XX
PD   13-FEB-2003.
XX
PF   16-JUL-2002; 2002WO-US022676.
XX
PR   30-JUL-2001; 2001US-00918187.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Crooke RM,  Graham MJ;
XX
DR   WPI; 2003-248160/24.
XX
PT   New antisense oligonucleotides targeted to nucleic acids encoding human
PT   stearoyl-CoA desaturase, useful for treating diseases associated with the
PT   desaturase, e.g. atherosclerosis, and in diagnostic and research
PT   applications.
XX
PS   Claim 3; Page 94; 117pp; English.
XX
CC   The present invention describes a compound (I) that is 8-50 nucleobases
CC   in length targeted to a nucleic acid molecule encoding human stearoyl-CoA
CC   desaturase, and which specifically hybridises with and inhibits the
CC   expression of human stearoyl-CoA desaturase, or which specifically
CC   hybridises with at least an 8-nucleobase portion of an active site on a
CC   nucleic acid molecule encoding human stearoyl-CoA desaturase. Human
CC   stearoyl-CoA desaturase is mapped to chromosome 10. (I) has antilipaemic,
CC   cardiovascular, antiarteriosclerotic, cytostatic and antiinflammatory
CC   activities, and can be used in antisense therapy. The antisense compounds
CC   (I) can be used for modulating the expression of human stearoyl-CoA
CC   desaturase and for treating diseases or conditions associated with
CC   expression of human stearoyl-CoA desaturase, e.g. abnormal lipid or
CC   cholesterol metabolism, atherosclerosis, or cardiovascular diseases. The
CC   antisense compounds (I) can also be used for diagnostics, therapeutics
CC   and prophylaxis, e.g. to prevent or delay infection, inflammation or
CC   tumour formation, as research reagents and kits, and in distinguishing
CC   between functions of various members of a biological pathway. The present
CC   sequence represents a human stearoyl-CoA desaturase inhibiting chimeric
CC   phosphorothioate antisense oligonucleotide, which is given in an example
CC   from the present invention
XX
SQ   Sequence 20 BP; 4 A; 6 C; 4 G; 6 T; 0 U; 0 Other;

  Query Match             31.2%;  Score 20;  DB 1;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 3.3;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         23 AGAATGCTCAGGGTCACTGA 42
               ||||||||||||||||||||
Db         20 AGAATGCTCAGGGTCACTGA 1


RESULT 5
ADX18220/c
ID   ADX18220 standard; DNA; 20 BP.
XX
AC   ADX18220;
XX
DT   05-MAY-2005  (first entry)
XX
DE   Human Stearoyl-CoA desaturase antisense oligonucelotide ISIS 300911.
XX
KW   Antisense; gene therapy; Stearoyl-CoA desaturase; hypertension;
KW   hypotensive; non-insulin dependent diabetes; antidiabetic;
KW   endocrine disease; gastrointestinal disease; metabolic disorder; cancer;
KW   cytostatic; neoplasm; obesity; anorectic; nutritional disorder;
KW   Cardiovascular disease; Dermatological disease; Immune disorder;
KW   Neurological disease; ss.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
PN   WO2005014607-A2.
XX
PD   17-FEB-2005.
XX
PF   15-JUL-2004; 2004WO-US018932.
XX
PR   15-JUL-2003; 2003US-00619253.
XX
PA   (ISIS-) ISIS PHARM INC.
XX
PI   Crooke RM,  Graham MJ;
XX
DR   WPI; 2005-163213/17.
XX
PT   New compound comprising 8-50 nucleobases targeted to a nucleic acid
PT   molecule encoding stearoyl-CoA desaturase, useful in preparing a
PT   composition for treating a condition associated with stearoyl-CoA
PT   desaturase, e.g., obesity.
XX
PS   Claim 1; SEQ ID NO 124; 256pp; English.
XX
CC   The invention relates to a new compound, which is targeted to a nucleic
CC   acid molecule encoding stearoyl-CoA desaturase and inhibits its
CC   expression. The compound is useful in preparing a composition for
CC   treating an animal having a disease or condition associated with stearoyl
CC   -CoA desaturase, e.g. cardiovascular disorder, obesity, non-insulin-
CC   dependent diabetes mellitus, a skin disease, hypertension, a neurological
CC   disease, an immune disorder or cancer. The present sequence represents a
CC   human stearoyl-CoA desaturase antisense oligonucleotide.
XX
SQ   Sequence 20 BP; 4 A; 5 C; 6 G; 5 T; 0 U; 0 Other;

  Query Match             31.2%;  Score 20;  DB 1;  Length 20;
  Best Local Similarity   100.0%;  Pred. No. 3.3;
  Matches   20;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         32 AGGGTCACTGAACCACTGCT 51
               ||||||||||||||||||||
Db         20 AGGGTCACTGAACCACTGCT 1


RESULT 6
ADX18126/c
ID   ADX18126 standard; DNA; 20 BP.
XX
AC   ADX18126;
XX
DT   05-MAY-2005  (first entry)
XX
DE   Human Stearoyl-CoA desaturase antisense oligonucelotide ISIS 147919.
XX
KW   Antisense; gene therapy; Stearoyl-CoA desaturase; hypertension;
KW   hypotensive; non-insulin dependent diabetes; antidiabetic;
KW   endocrine disease; gastrointestinal disease; metabolic disorder; cancer;
KW   cytostatic; neoplasm; obesity; anorectic; nutritional disorder;
KW   Cardiovascular disease; Dermatological disease; Immune disorder;
KW   Neurological disease; ss.
XX
OS   Homo sapiens.
```

OS Synthetic.
XX
PN WO2005014607-A2.
XX
PD 17-FEB-2005.
XX
PF 15-JUL-2004; 2004WO-US018932.
XX
PR 15-JUL-2003; 2003US-00619253.
XX
PA (ISIS-) ISIS PHARM INC.
XX
PI Crooke RM, Graham MJ;
XX
DR WPI; 2005-163213/17.
XX
PT New compound comprising 8-50 nucleobases targeted to a nucleic acid
PT molecule encoding stearoyl-CoA desaturase, useful in preparing a
PT composition for treating a condition associated with stearoyl-CoA
PT desaturase, e.g., obesity.
XX
PS Example 15; SEQ ID NO 30; 256pp; English.
XX
CC The invention relates to a new compound, which is targeted to a nucleic
CC acid molecule encoding stearoyl-CoA desaturase and inhibits its
CC expression. The compound is useful in preparing a composition for
CC treating an animal having a disease or condition associated with stearoyl
CC -CoA desaturase, e.g. cardiovascular disorder, obesity, non-insulin-
CC dependent diabetes mellitus, a skin disease, hypertension, a neurological
CC disease, an immune disorder or cancer. The present sequence represents a
CC human stearoyl-CoA desaturase antisense oligonucleotide.
XX
SQ Sequence 20 BP; 4 A; 6 C; 4 G; 6 T; 0 U; 0 Other;

Query Match 31.2%; Score 20; DB 1; Length 20;
Best Local Similarity 100.0%; Pred. No. 3.3;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 23 AGAATGCTCAGGGTCACTGA 42
||||||||||||||||||||
Db 20 AGAATGCTCAGGGTCACTGA 1

RESULT 7
ADE27514/c
ID ADE27514 standard; RNA; 19 BP.
XX
AC ADE27514;
XX
DT 29-JAN-2004 (first entry)
XX
DE Stearoyl-CoA desaturase siNA oligonucleotide SEQ ID NO:458.
XX
KW short interfering nucleic acid; siNA; downregulation; inhibition; SCD;
KW stearoyl-CoA desaturase; RNA interference; anorectic; antidiabetic;
KW antiarteriosclerotic; cytostatic; virucide; obesity; diabetes;
KW atherosclerosis; cancer; viral infection; drug screening;
KW genetic engineering; pharmacogenomic; gene mapping; ss.
XX
OS Synthetic.
XX
PN WO2003070885-A2.
XX
PD 28-AUG-2003.
XX
PF 13-FEB-2003; 2003WO-US004317.
XX
PR 20-FEB-2002; 2002US-0358580P.
PR 11-MAR-2002; 2002US-0363124P.
PR 06-JUN-2002; 2002US-0386782P.
PR 29-AUG-2002; 2002US-0406784P.
PR 05-SEP-2002; 2002US-0408378P.
PR 09-SEP-2002; 2002US-0409293P.
PR 20-SEP-2002; 2002US-0412304P.
PR 15-JAN-2003; 2003US-0440129P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J, Beigelman L, Thompson J;
XX
DR WPI; 2003-721687/68.
XX
PT New short interfering nucleic acid, useful e.g. for treatment and
PT diagnosis of obesity or diabetes, downregulates expression of the
PT stearoyl-CoA desaturase gene.
XX
PS Example 3; SEQ ID NO 458; 139pp; English.
XX
CC The present invention describes a short interfering nucleic acid (siNA)
CC that downregulates expression of the SCD (stearoyl-CoA desaturase) gene
CC by RNA interference. Also described: (1) modulating expression of SCD
CC genes in cells, tissue explants or organisms by introduction of siNA; (2)
CC kits for in vitro or in vivo delivery of siNA; (3) conjugates and/or
CC complexes of siNA; and (4) vectors that express siNA. SCD inhibiting
CC siNAs have anorectic, antidiabetic, antiarteriosclerotic, cytostatic and
CC virucide activities. The siNAs can be used to modulate expression of SCD
CC genes, in cells, tissue explants or organisms, e.g. for treating obesity;
CC diabetes (types I and II); atherosclerosis; cancer and viral infections.
CC They can also be used for drug screening; diagnosis; target
CC identification and validation; genetic engineering; pharmacogenomics;
CC studying gene function and gene mapping (e.g. of single-nucleotide
CC polymorphisms). The present sequence represents an SCD siNA, which is
CC used in the exemplification of the present invention.
XX
SQ Sequence 19 BP; 3 A; 5 C; 5 G; 0 T; 6 U; 0 Other;

Query Match 29.7%; Score 19; DB 1; Length 19;
Best Local Similarity 100.0%; Pred. No. 4.2;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 21 ACAGAATGCTCAGGGTCAC 39
|||||||||||||||||||
Db 19 ACAGAATGCTCAGGGTCAC 1

RESULT 8
ADE27225
ID ADE27225 standard; RNA; 19 BP.
XX
AC ADE27225;
XX
DT 29-JAN-2004 (first entry)
XX
DE Stearoyl-CoA desaturase siNA oligonucleotide SEQ ID NO:169.
XX
KW short interfering nucleic acid; siNA; downregulation; inhibition; SCD;
KW stearoyl-CoA desaturase; RNA interference; anorectic; antidiabetic;
KW antiarteriosclerotic; cytostatic; virucide; obesity; diabetes;
KW atherosclerosis; cancer; viral infection; drug screening;
KW genetic engineering; pharmacogenomic; gene mapping; ss.
XX
OS Synthetic.
XX
PN WO2003070885-A2.
XX
PD 28-AUG-2003.
XX
PF 13-FEB-2003; 2003WO-US004317.
XX
PR 20-FEB-2002; 2002US-0358580P.
PR 11-MAR-2002; 2002US-0363124P.
PR 06-JUN-2002; 2002US-0386782P.
PR 29-AUG-2002; 2002US-0406784P.
PR 05-SEP-2002; 2002US-0408378P.
PR 09-SEP-2002; 2002US-0409293P.
PR 20-SEP-2002; 2002US-0412304P.

PR 15-JAN-2003; 2003US-0440129P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J, Beigelman L, Thompson J;
XX
DR WPI; 2003-721687/68.
XX
PT New short interfering nucleic acid, useful e.g. for treatment and
PT diagnosis of obesity or diabetes, downregulates expression of the
PT stearoyl-CoA desaturase gene.
XX
PS Example 3; SEQ ID NO 169; 139pp; English.
XX
CC The present invention describes a short interfering nucleic acid (siNA)
CC that downregulates expression of the SCD (stearoyl-CoA desaturase) gene
CC by RNA interference. Also described: (1) modulating expression of SCD
CC genes in cells, tissue explants or organisms by introduction of siNA; (2)
CC kits for in vitro or in vivo delivery of siNA; (3) conjugates and/or
CC complexes of siNA; and (4) vectors that express siNA. SCD inhibiting
CC siNAs have anorectic, antidiabetic, antiarteriosclerotic, cytostatic and
CC virucide activities. The siNAs can be used to modulate expression of SCD
CC genes, in cells, tissue explants or organisms, e.g. for treating obesity;
CC diabetes (types I and II); atherosclerosis; cancer and viral infections.
CC They can also be used for drug screening; diagnosis; target
CC identification and validation; genetic engineering; pharmacogenomics;
CC studying gene function and gene mapping (e.g. of single-nucleotide
CC polymorphisms). The present sequence represents an SCD siNA, which is
CC used in the exemplification of the present invention.
XX
SQ Sequence 19 BP; 3 A; 7 C; 2 G; 0 T; 7 U; 0 Other;

Query Match 29.7%; Score 19; DB 1; Length 19;
Best Local Similarity 63.2%; Pred. No. 4.2;
Matches 12; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

```
Qy         39 CTGAACCACTGCTTCTCTT 57
              |:|||||||:||::|:|::
Db          1 CUGAACCACUGCUUCUCUU 19
```

RESULT 9
ADE27223
ID ADE27223 standard; RNA; 19 BP.
XX
AC ADE27223;
XX
DT 29-JAN-2004 (first entry)
XX
DE Stearoyl-CoA desaturase siNA oligonucleotide SEQ ID NO:167.
XX
KW short interfering nucleic acid; siNA; downregulation; inhibition; SCD;
KW stearoyl-CoA desaturase; RNA interference; anorectic; antidiabetic;
KW antiarteriosclerotic; cytostatic; virucide; obesity; diabetes;
KW atherosclerosis; cancer; viral infection; drug screening;
KW genetic engineering; pharmacogenomic; gene mapping; ss.
XX
OS Synthetic.
XX
PN WO2003070885-A2.
XX
PD 28-AUG-2003.
XX
PF 13-FEB-2003; 2003WO-US004317.
XX
PR 20-FEB-2002; 2002US-0358580P.
PR 11-MAR-2002; 2002US-0363124P.
PR 06-JUN-2002; 2002US-0386782P.
PR 29-AUG-2002; 2002US-0406784P.
PR 05-SEP-2002; 2002US-0408378P.
PR 09-SEP-2002; 2002US-0409293P.
PR 20-SEP-2002; 2002US-0412304P.
PR 15-JAN-2003; 2003US-0440129P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J, Beigelman L, Thompson J;
XX
DR WPI; 2003-721687/68.
XX
PT New short interfering nucleic acid, useful e.g. for treatment and
PT diagnosis of obesity or diabetes, downregulates expression of the
PT stearoyl-CoA desaturase gene.
XX
PS Example 3; SEQ ID NO 167; 139pp; English.
XX
CC The present invention describes a short interfering nucleic acid (siNA)
CC that downregulates expression of the SCD (stearoyl-CoA desaturase) gene
CC by RNA interference. Also described: (1) modulating expression of SCD
CC genes in cells, tissue explants or organisms by introduction of siNA; (2)
CC kits for in vitro or in vivo delivery of siNA; (3) conjugates and/or
CC complexes of siNA; and (4) vectors that express siNA. SCD inhibiting
CC siNAs have anorectic, antidiabetic, antiarteriosclerotic, cytostatic and
CC virucide activities. The siNAs can be used to modulate expression of SCD
CC genes, in cells, tissue explants or organisms, e.g. for treating obesity;
CC diabetes (types I and II); atherosclerosis; cancer and viral infections.
CC They can also be used for drug screening; diagnosis; target
CC identification and validation; genetic engineering; pharmacogenomics;
CC studying gene function and gene mapping (e.g. of single-nucleotide
CC polymorphisms). The present sequence represents an SCD siNA, which is
CC used in the exemplification of the present invention.
XX
SQ Sequence 19 BP; 3 A; 9 C; 4 G; 0 T; 3 U; 0 Other;

Query Match 29.7%; Score 19; DB 1; Length 19;
Best Local Similarity 84.2%; Pred. No. 4.2;
Matches 16; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

```
Qy          3 GGCAGCTCCCTCCTGCACA 21
              ||||||:|||:||:|||||
Db          1 GGCAGCUCCCUCCUGCACA 19
```

RESULT 10
ADE27513/c
ID ADE27513 standard; RNA; 19 BP.
XX
AC ADE27513;
XX
DT 29-JAN-2004 (first entry)
XX
DE Stearoyl-CoA desaturase siNA oligonucleotide SEQ ID NO:457.
XX
KW short interfering nucleic acid; siNA; downregulation; inhibition; SCD;
KW stearoyl-CoA desaturase; RNA interference; anorectic; antidiabetic;
KW antiarteriosclerotic; cytostatic; virucide; obesity; diabetes;
KW atherosclerosis; cancer; viral infection; drug screening;
KW genetic engineering; pharmacogenomic; gene mapping; ss.
XX
OS Synthetic.
XX
PN WO2003070885-A2.
XX
PD 28-AUG-2003.
XX
PF 13-FEB-2003; 2003WO-US004317.
XX
PR 20-FEB-2002; 2002US-0358580P.
PR 11-MAR-2002; 2002US-0363124P.
PR 06-JUN-2002; 2002US-0386782P.
PR 29-AUG-2002; 2002US-0406784P.
PR 05-SEP-2002; 2002US-0408378P.
PR 09-SEP-2002; 2002US-0409293P.
PR 20-SEP-2002; 2002US-0412304P.
PR 15-JAN-2003; 2003US-0440129P.
XX

PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J, Beigelman L, Thompson J;
XX
DR WPI; 2003-721687/68.
XX
PT New short interfering nucleic acid, useful e.g. for treatment and
PT diagnosis of obesity or diabetes, downregulates expression of the
PT stearoyl-CoA desaturase gene.
XX
PS Example 3; SEQ ID NO 457; 139pp; English.
XX
CC The present invention describes a short interfering nucleic acid (siNA)
CC that downregulates expression of the SCD (stearoyl-CoA desaturase) gene
CC by RNA interference. Also described: (1) modulating expression of SCD
CC genes in cells, tissue explants or organisms by introduction of siNA; (2)
CC kits for in vitro or in vivo delivery of siNA; (3) conjugates and/or
CC complexes of siNA; and (4) vectors that express siNA. SCD inhibiting
CC siNAs have anorectic, antidiabetic, antiarteriosclerotic, cytostatic and
CC virucide activities. The siNAs can be used to modulate expression of SCD
CC genes, in cells, tissue explants or organisms, e.g. for treating obesity;
CC diabetes (types I and II); atherosclerosis; cancer and viral infections.
CC They can also be used for drug screening; diagnosis; target
CC identification and validation; genetic engineering; pharmacogenomics;
CC studying gene function and gene mapping (e.g. of single-nucleotide
CC polymorphisms). The present sequence represents an SCD siNA, which is
CC used in the exemplification of the present invention.
XX
SQ Sequence 19 BP; 3 A; 4 C; 9 G; 0 T; 3 U; 0 Other;

Query Match 29.7%; Score 19; DB 1; Length 19;
Best Local Similarity 100.0%; Pred. No. 4.2;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          3 GGCAGCTCCCTCCTGCACA 21
              ||||||||||||||||||
Db         19 GGCAGCTCCCTCCTGCACA 1
```

RESULT 11
ADE27224
ID ADE27224 standard; RNA; 19 BP.
XX
AC ADE27224;
XX
DT 29-JAN-2004 (first entry)
XX
DE Stearoyl-CoA desaturase siNA oligonucleotide SEQ ID NO:168.
XX
KW short interfering nucleic acid; siNA; downregulation; inhibition; SCD;
KW stearoyl-CoA desaturase; RNA interference; anorectic; antidiabetic;
KW antiarteriosclerotic; cytostatic; virucide; obesity; diabetes;
KW atherosclerosis; cancer; viral infection; drug screening;
KW genetic engineering; pharmacogenomic; gene mapping; ss.
XX
OS Synthetic.
XX
PN WO2003070885-A2.
XX
PD 28-AUG-2003.
XX
PF 13-FEB-2003; 2003WO-US004317.
XX
PR 20-FEB-2002; 2002US-0358580P.
PR 11-MAR-2002; 2002US-0363124P.
PR 06-JUN-2002; 2002US-0386782P.
PR 29-AUG-2002; 2002US-0406784P.
PR 05-SEP-2002; 2002US-0408378P.
PR 09-SEP-2002; 2002US-0409293P.
PR 20-SEP-2002; 2002US-0412304P.
PR 15-JAN-2003; 2003US-0440129P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX
PI Mcswiggen J, Beigelman L, Thompson J;
XX
DR WPI; 2003-721687/68.
XX
PT New short interfering nucleic acid, useful e.g. for treatment and
PT diagnosis of obesity or diabetes, downregulates expression of the
PT stearoyl-CoA desaturase gene.
XX
PS Example 3; SEQ ID NO 168; 139pp; English.
XX
CC The present invention describes a short interfering nucleic acid (siNA)
CC that downregulates expression of the SCD (stearoyl-CoA desaturase) gene
CC by RNA interference. Also described: (1) modulating expression of SCD
CC genes in cells, tissue explants or organisms by introduction of siNA; (2)
CC kits for in vitro or in vivo delivery of siNA; (3) conjugates and/or
CC complexes of siNA; and (4) vectors that express siNA. SCD inhibiting
CC siNAs have anorectic, antidiabetic, antiarteriosclerotic, cytostatic and
CC virucide activities. The siNAs can be used to modulate expression of SCD
CC genes, in cells, tissue explants or organisms, e.g. for treating obesity;
CC diabetes (types I and II); atherosclerosis; cancer and viral infections.
CC They can also be used for drug screening; diagnosis; target
CC identification and validation; genetic engineering; pharmacogenomics;
CC studying gene function and gene mapping (e.g. of single-nucleotide
CC polymorphisms). The present sequence represents an SCD siNA, which is
CC used in the exemplification of the present invention.
XX
SQ Sequence 19 BP; 6 A; 5 C; 5 G; 0 T; 3 U; 0 Other;

Query Match 29.7%; Score 19; DB 1; Length 19;
Best Local Similarity 84.2%; Pred. No. 4.2;
Matches 16; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

```
Qy         21 ACAGAATGCTCAGGGTCAC 39
              ||||||:||:|||||:|||
Db          1 ACAGAAUGCUCAGGGUCAC 19
```

RESULT 12
ADE27515/c
ID ADE27515 standard; RNA; 19 BP.
XX
AC ADE27515;
XX
DT 29-JAN-2004 (first entry)
XX
DE Stearoyl-CoA desaturase siNA oligonucleotide SEQ ID NO:459.
XX
KW short interfering nucleic acid; siNA; downregulation; inhibition; SCD;
KW stearoyl-CoA desaturase; RNA interference; anorectic; antidiabetic;
KW antiarteriosclerotic; cytostatic; virucide; obesity; diabetes;
KW atherosclerosis; cancer; viral infection; drug screening;
KW genetic engineering; pharmacogenomic; gene mapping; ss.
XX
OS Synthetic.
XX
PN WO2003070885-A2.
XX
PD 28-AUG-2003.
XX
PF 13-FEB-2003; 2003WO-US004317.
XX
PR 20-FEB-2002; 2002US-0358580P.
PR 11-MAR-2002; 2002US-0363124P.
PR 06-JUN-2002; 2002US-0386782P.
PR 29-AUG-2002; 2002US-0406784P.
PR 05-SEP-2002; 2002US-0408378P.
PR 09-SEP-2002; 2002US-0409293P.
PR 20-SEP-2002; 2002US-0412304P.
PR 15-JAN-2003; 2003US-0440129P.
XX
PA (RIBO-) RIBOZYME PHARM INC.
XX

PI Mcswiggen J, Beigelman L, Thompson J;
XX
DR WPI; 2003-721687/68.
XX
PT New short interfering nucleic acid, useful e.g. for treatment and
PT diagnosis of obesity or diabetes, downregulates expression of the
PT stearoyl-CoA desaturase gene.
XX
PS Example 3; SEQ ID NO 459; 139pp; English.
XX
CC The present invention describes a short interfering nucleic acid (siNA)
CC that downregulates expression of the SCD (stearoyl-CoA desaturase) gene
CC by RNA interference. Also described: (1) modulating expression of SCD
CC genes in cells, tissue explants or organisms by introduction of siNA; (2)
CC kits for in vitro or in vivo delivery of siNA; (3) conjugates and/or
CC complexes of siNA; and (4) vectors that express siNA. SCD inhibiting
CC siNAs have anorectic, antidiabetic, antiarteriosclerotic, cytostatic and
CC virucide activities. The siNAs can be used to modulate expression of SCD
CC genes, in cells, tissue explants or organisms, e.g. for treating obesity;
CC diabetes (types I and II); atherosclerosis; cancer and viral infections.
CC They can also be used for drug screening; diagnosis; target
CC identification and validation; genetic engineering; pharmacogenomics;
CC studying gene function and gene mapping (e.g. of single-nucleotide
CC polymorphisms). The present sequence represents an SCD siNA, which is
CC used in the exemplification of the present invention.
XX
SQ Sequence 19 BP; 7 A; 2 C; 7 G; 0 T; 3 U; 0 Other;

Query Match 29.7%; Score 19; DB 1; Length 19;
Best Local Similarity 100.0%; Pred. No. 4.2;
Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy         39 CTGAACCACTGCTTCTCTT 57
              |||||||||||||||||||
Db         19 CTGAACCACTGCTTCTCTT 1
```

Search completed: May 9, 2006, 12:41:12
Job time : 0.001 secs